

We claimed:

1. In a fuel fired furnace having a heating section containing at least one burner for firing said furnace and an air plenum for admitting combustion air to said at least one burner, said furnace having a blower for forcing combustion air into an air duct which is operably connected between said blower and said plenum, said blower having a first power source, said duct having a normally closed drop door that can be opened to admit ambient air into said duct, the improvement comprising at least one ventilator operably connected to said duct downstream of both said blower and said drop door and upstream of said plenum to force ambient air into said duct toward said plenum, said ventilator having a second power source, said ventilator having a movable close-off plate that is normally closed but which can be opened when said ventilator is in operation to admit ambient air to said ventilator and by way of said ventilator to said duct, said second power source being different from said first power source so that said ventilator is capable of operation independent of said blower and said first power source.
2. The apparatus of claim 1 wherein said ventilator is angled with respect to said long axis of said duct so as to force air entering said duct from said ventilator in the direction of said plenum and away from said drop door.
3. The apparatus of claim 1 wherein said ventilator has an air flow capacity of less no more than 66% of the air flow capacity of said blower.
4. The apparatus of claim 1 wherein an air flow meter is carried in said duct between said ventilator and said plenum.
5. The apparatus of claim 1 wherein said blower is one of electrically or steam turbine powered, and said ventilator is capable of operation when said blower is inoperable.
6. The apparatus of claim 5 wherein said ventilator is pneumatically powered.

7. A method for continuing the operation of a fuel fired furnace having a heating section containing a plenum for feeding air to at least one burner, and having a blower operated by a first power source for forcing combustion air through a duct into said plenum said duct having a normally closed drop door which when open admits ambient air into said duct, the improvement comprising providing a normally closed ventilator in operable communication with said duct downstream of said drop door, said ventilator being normally not in operation, said ventilator when in operation being powered by a second power source that is independent of said first power source, when said blower operation is reduced opening said drop door, and opening and operating said ventilator thereby to maintain at least partial air flow in said duct to said plenum notwithstanding the reduced operation of said blower.
8. The method of claim 7 wherein said blower operation is completely stopped.
9. The method of claim 7 wherein said ventilator when in operation has an air flow capacity of no more than 66% of said blower.
10. The method of claim 7 wherein said ventilator is oriented with respect to said duct so as to force air in the direction of said plenum.
11. The method of claim 7 wherein said blower is powered by one of an electric motor and a steam turbine, and said ventilator is pneumatically powered.